

## Efficacy of Learning: Digital Sources versus Print

**Authors :** Rahimah Akbar, Abdullah Al-Hashemi, Hanan Taqi, Taiba Sadeq

**Abstract :** As technology continues to develop, teaching curriculums in both schools and universities have begun adopting a more computer/digital based approach to the transmission of knowledge and information, as opposed to the more old-fashioned use of textbooks. This gives rise to the question: Are there any differences in learning from a digital source over learning from a printed source, as in from a textbook? More specifically, which medium of information results in better long-term retention? A review of the confounding factors implicated in understanding the relationship between learning from the two different mediums was done. Alongside this, a 4-week cohort study involving 76 1st year English Language female students was performed, whereby the participants were divided into 2 groups. Group A studied material from a paper source (referred to as the Print Medium), and Group B studied material from a digital source (Digital Medium). The dependent variables were grading of memory recall indexed by a 4 point grading system, and total frequency of item repetition. The study was facilitated by advanced computer software called Super Memo. Results showed that, contrary to prevailing evidence, the Digital Medium group showed no statistically significant differences in terms of the shift from Remember (Episodic) to Know (Semantic) when all confounding factors were accounted for. The shift from Random Guess and Familiar to Remember occurred faster in the Digital Medium than it did in the Print Medium.

**Keywords :** digital medium, print medium, long-term memory recall, episodic memory, semantic memory, super memo, forgetting index, frequency of repetitions, total time spent

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